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ABSTRACT

In Kentucky, 105 of 178 school districts, or 59%, are classified as rural. State law and administrative regulations presume that most school districts are both rural and isolated. The environment for rural schools in the state is heavily influenced by the fact that the majority of school districts are rural. Each school district must have a written plan for a program of school and community relations and provide a specified amount of school time to be spent on basic skills. Typically, rural students begin the day with a fairly long bus ride, may have parents who are unemployed or underemployed, are more likely to need special education services and less likely to be classified as gifted than urban students, and are likely to have parents who did not graduate from high school or have only a high school education. The rural student is apt to do more poorly in school than urban students and value education less. Rural school districts in Kentucky differ from urban school districts not only in student achievement but also in the adequacy of their funding. When school districts are ranked by quartiles of student density, the lowest two quartiles (i.e., half the districts) are shown to have equally average personal income: approximately five-eighths of the average personal income of the most dense quartile of districts. The highly varying tax rates on properties and the unequal distribution of wealth provide very unequal funding for school districts. In 1989, the supreme court ruled that the entire system of precollegiate education was unconstitutional because of the unequal educational opportunity. There has been a great deal of school consolidation in Kentucky's rural school districts, with virtually all feasible school consolidation having taken place. This document contains statistical data and 14 references. (ALL)

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The Condition of Rural Education in Kentucky: A Profile

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September 1989

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TABLE OF CONTENTS

Introduction 4

I. State Policies for Rural Education 5

What legislative policies are there?
What administrative policies are there?

II. Environment in Which Rural Schools Operate 5

How is the Kentucky state educational system organized?

III. Characteristics of Rural Students 7

How do rural students score on achievement tests?
What is the attendance rate of rural students?
What is the high school completion rate?

IV. Characteristics of Rural Schools 8

How do rural school districts differ from urban school districts?
How well are rural school districts funded?

V. Service Delivery Systems for School Improvement 10

What is the role of the State Department of Education?
What is the role of private agencies and groups?
Summary

References 11

INTRODUCTION

This profile of Kentucky rural schools addresses itself to the following questions:

- What proportion of school systems in the state is rural?
- In what ways do rural schools differ from urban and suburban schools?
- Does the State Department of Education treat rural schools differently from urban/suburban schools? What accommodation is made for the differences between urban and rural schools?
- How does student achievement in rural schools compare with that in urban/suburban schools? What factors appear to correlate with achievement in rural schools?

We address these questions in five major sections on state policies, environment in which rural schools operate, characteristics of rural students, characteristics of rural schools, and service delivery systems for school improvement. Wherever appropriate, recent developments at the state level that clearly affect rural education are emphasized. Various quantitative data were supplied by the Kentucky Department of Education and pertain to the 1986-1987 school year. Other data sources appear in the reference list.

The chief state school officer is:

Dr. John Brock
Superintendent of Public Instruction
Kentucky Department of Education
Capital Plaza Tower
Frankfort, Kentucky 40601
502/564-4770

What is the definition of rural education?

There are many different definitions of "rural." The U. S. census defines rural as all "nonmetropolitan" areas. The census defines a metropolitan area as "a single county area or a group of contiguous counties that includes at least one 'central city' of 50,000 inhabitants or in some instances contiguous twin cities that together meet this population minimum" (Department of Commerce, 1983, p. XVIII). There are alternative ways to define rurality, based, for example, on population density or on other demographic characteristics. Because the state of Kentucky does not define

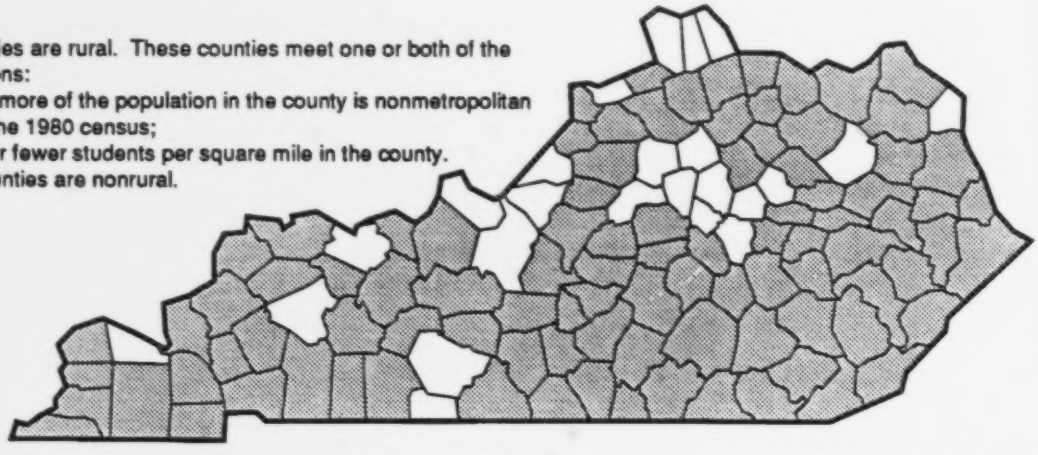
Rural Counties in Kentucky

KEY

All shaded counties are rural. These counties meet one or both of the following conditions:

- 75 percent or more of the population in the county is nonmetropolitan according to the 1980 census;
- there are 10 or fewer students per square mile in the county.

All unshaded counties are nonrural.



"rural education," we are using the following definition, for consistency in reporting: **A rural school district is one in which 75 percent or more of the population is characterized as rural by the 1980 census or one in which student density is equal to or less than 10 pupils per square mile.** This definition combines census criteria with other population density criteria. According to this definition, 105 of Kentucky's 178 school districts are rural.*

*Data on school districts for Kentucky come from Kentucky Essential Skills Test: Statewide Testing Results (1986-1987). That source lists 178 school districts. One of these districts is no longer in existence.

I. STATE POLICIES FOR RURAL EDUCATION

The state of Kentucky is predominantly rural. State law and administrative regulations presume that most school districts are both rural and isolated.

What legislative policies are there?

Kentucky school legislation does not specify policies for rural education different from those for urban or suburban education. However, some legislation does appear to acknowledge the rural nature of most Kentucky school districts. For instance, the state laws concerning in-service teacher education provide the following:

> Each local school district board of education shall appoint a certified school employee to fulfill the role and responsibilities of an in-service education director.
>
> The state board of education shall provide an annual training program for local school district in-service education directors.
>
> The state board of education shall provide for a series of state sponsored, in-service education programs for teachers throughout the Commonwealth. The programs shall be of one (1) day duration and located at selected sites statewide....
>
> Local school districts with an enrollment of sixty-five thousand (65,000) or more students shall be exempt from the requirements of this section provided they meet the standards for in-service training programs established by the state board of education (*Laws Applicable to Standard I*, 1986, p. 9).

What administrative policies are there?

The State Department of Education does not assign any of its staff to rural education per se, although two state department staff members specialize in areas of particular relevance to rural education: agribusiness and distance learning. State department officials note that, since Kentucky is a predominantly rural state, much of the department's efforts reflect a widespread concern for rural education.

II. ENVIRONMENT IN WHICH RURAL SCHOOLS OPERATE

As the map on page 4 shows graphically, 105 or 59 percent of the 178 school districts in Kentucky are rural, by AEL's definition. The environment for rural schools in the state is heavily influenced by the fact that the majority of school districts are rural.

How is the Kentucky state educational system organized?

The educational system is governed by an eleven-member state board of education appointed by the governor. The Superintendent of Public Instruction, who is elected, supervises the State Department of Education and serves as the executive director of the state board. The superintendent's duties are established by the legislature.

School attendance is mandatory between the ages of six and sixteen. Children who are five years of age by October may be admitted to kindergarten. Successful

completion of kindergarten is a prerequisite for first grade enrollment in the public schools, as of the 1986-87 school year. The school year for public school pupils must include at least 175 scheduled days of instruction. The school day must include at least six hours of instruction. Public schools provide instruction in kindergarten through grade twelve (*Laws Applicable to Standard I*, 1986). School districts may be county districts or subcounty units; rural school districts are of both types.

By law, local school board members elected for the first time since July 1, 1984, must have at least a high school education or equivalent, including the General Educational Development or G.E.D. (*Laws Applicable to Standard I*, 1986, p. 22). Each school district must have a written plan for a program of school and community relations: "Teachers, administrators, parents, pupils, and lay citizens [must] have the opportunity for input in the local district's total instructional program" (*Kentucky standards*, 1988, p. 4-6).

State laws specify the amount of school time to be spent on basic skills:

> At least sixty-five percent (65%) of the time in each elementary school year shall be spent on basic skills. This applies to the first eight (8) grades of school regardless of the organizational pattern of the school. When taken as an elective, foreign language shall be considered part of the sixty-five percent (65%) time block. The remainder of the time may be scheduled by the local school in accordance with regulations of the state board of education and may include music, art, physical education, health, industrial arts, home economics, career education, environmental education and consumer education as a part of the elective program.
>
> All secondary school students in grades 9-12 shall continue to develop competency in reading and writing, including grammar and spelling, with sixty percent (60%) of their time, as defined by state board regulations, being devoted to basic skills development in the curriculum areas of English, language arts, science, mathematics and social studies. When taken as an elective, foreign language shall be considered as part of the sixty percent (60%) requirement (*Laws applicable to Standard I*, 1986, pp. 16-17).

Successful completion of 20 Carnegie units (or full-year courses) is required for high school graduation: four units of language arts; two of social studies (including one unit of U. S. history); three of mathematics; two of science; one-half unit of health education; one-half unit of physical education; an additional unit in either mathematics, science, social studies, language arts, foreign language, or a vocational course; and seven elective units. Requirements for a Commonwealth Diploma (or honors diploma) are more rigorous (*Kentucky Standards*, 1988).

The Educational Improvement Act makes the following provisions for educational improvement:

> KRS158.650 to 158.740, as amended by Senate Bill 202, the Educational Improvement Act, mandate a program of assessment testing, annual performance reports, educational improvement plans and various sanctions to insure the right of public school students to acquire the competencies in the essential skills necessary to complete high school, pursue post secondary education, or enter the work force; and to assure such students access to programs and services appropriate to their educational needs in the areas of competencies in the essential skills, with the Department of Education to administer the act pursuant to regulations of the State Board of Education and to develop a comprehensive implementation plan.... (*Laws Applicable to Standard I*, 1986, p. 30).

Under a special provision the State Board of Elementary and Secondary Education may declare a school district to be educationally deficient if the district fails to meet, or to make satisfactory progress toward meeting, minimum program and service standards; or if too many students fail to attain minimum competency in the essential skills or to make satisfactory progress toward competency. The state board of education has the authority to assume control of a local school

district if necessary to overcome such deficiencies.

Two county school districts, Floyd and Whitley (both large by AEL's definition), have been taken over by the state department due to financial and academic bankruptcy. Overseers were appointed by the state department to administer these districts, and all school district staff, including the superintendent, are subordinate to the overseers. Fifteen small county districts have not been taken over but are being given state assistance in management, hiring, transportation, and budget.

Kentucky requires that its "approved" teacher training programs meet all of the teacher certification standards of the National Council for Accreditation of Teacher Education. The average teacher salary in Kentucky is $24,920, which is below the U. S. average of $29,629. The state ranks 39th in average teacher salaries (*Charleston Gazette*, 7/22/89, p. 54). Both beginning teachers and beginning administrators are required to demonstrate their competence during a year of internship. During the intern year they are under the guidance of internship committees which monitor their performance and provide assistance in areas of weakness. Upon successful completion of the intern year they receive professional certification (*Laws Applicable to Standard I*, 1986).

Private and church-related schools may voluntarily conform to the same rules and regulations as the public schools and be accredited by the state department of education. Home schooling is permitted. The home school may be accredited by the State Department of Education, if it so requests. The parent must notify the state department of education by letter of the name of the child or children and name of the teacher. There are no educational requirements for the teachers of home schools.

III. CHARACTERISTICS OF RURAL STUDENTS

In general, most rural public school students begin the day with a fairly long bus ride, may have parents who are unemployed or underemployed, are more likely to need special education services and less likely to be classified as "gifted" than urban students, and are likely to have parents who did not graduate from high school or have only a high school education. Rural students who complete their education are under considerable pressure to leave home for employment, especially if they have postsecondary education, because well paying jobs requiring specialized skills are almost nonexistent in most rural areas. Thus, in Kentucky, a rural student is apt to belong to a family whose income is below the state average. In part because of the family's low socioeconomic status, the rural student is apt to do more poorly in school than urban students and to value education less.

How do rural students score on achievement tests?

In general, as Figure 1 shows, rural pupils in Kentucky do not score as well on the state mandated achievement test (Kentucky Essential Skills Test) as do urban and suburban students, though state department officials note that many rural or small districts do report high aggregate achievement levels. (It should be noted that the Kentucky legislature has discarded the Kentucky Essential Skills Test since these data were collected.) The correlation matrix in Table 1 indicates the relationship between

TABLE 1

Correlations of Achievement and Demographic Variables

Correlations:	Reading	Mathematics
Total enrollment	-.01	-.04
Student density	.02	.01
Percent adults with college	.16	.14
Percent nonmetro population	-.28**	-.17*
Income per pupil	.41**	.28**

1-tailed Significance: * = .01 ** = .001

(Note: Reading is based on the percentage passing Kentucky Essential Skills Test [KEST] reading in ninth grade; mathematics is based on the percentage passing KEST math in ninth grade.)

achievement in reading and mathematics and attending a rural school district, density of student population, size of the school district, and income per student. Most of the correlation coefficients are not statistically significant, but the negative correlation between ninth grade reading achievement and attending a rural school district is significant at the .001 level. There is a significant negative relationship at the .01 level of significance between attending a rural school and mathematics ninth grade achievement. The positive correlation between personal income per student and reading and mathematics achievement is significant at the .001 level.

What is the attendance rate of rural students?

The attendance rate of rural students is about the same as that of urban students. (See Figure 1.)

What is the high school completion rate?

Rural students in Kentucky complete high school at a slightly lower rate than nonrural students. However, it should be noted that high school completion rate is computed differently in different states and seldom is a good indicator of the dropout rate. In Kentucky it is based on the percentage of students in grades 7-12 who (1) leave school at age sixteen, (2) are excused from school for mental or physical disability, (3) are "discharged," or (4) are excused because of marriage (Kentucky State Department of Education, 1987, p. iii). Data reported here are derived by AEL as the per year (7-12) dropout rate, multiplied by 6 (for each year 7-12). These data should be regarded as rough estimates only. The completion rate has been calculated as the complement of the dropout rate thus derived. Many students drop out before reaching the twelfth grade, but, report state officials, that number has been declining in recent years as the result of strenuous dropout prevention efforts. (See Figure 2.)

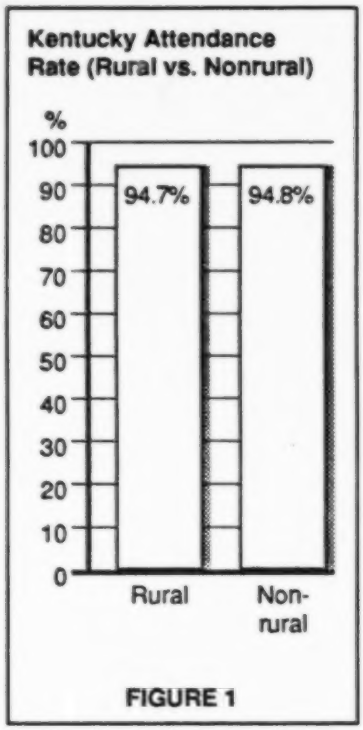


FIGURE 1

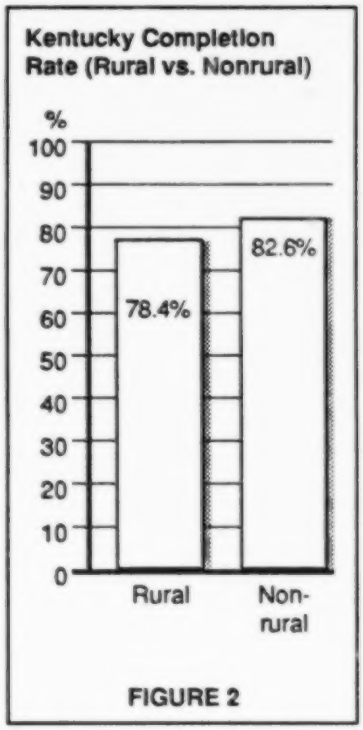


FIGURE 2

IV. CHARACTERISITCS OF RURAL SCHOOLS

Rural school districts in Kentucky differ from urban school districts not only in student achievement but also in the adequacy of their funding.

How do rural school districts differ from urban school districts?

As might be expected, rural school districts have more rural schools than do urban school districts. However, there are small, isolated rural schools even in some large, predominantly urban counties.

Rural schools generally have smaller enrollments, and there are usually fewer schools in rural districts than in urban districts. In Kentucky these differences are not dramatic, perhaps because Kentucky has few very large school districts at all. Sixty-seven percent of urban districts are sub-county units, which tend, of course, to have lower enrollments than county districts. The average number of schools in Kentucky's rural districts is seven schools, not greatly different from the average number of schools in non-rural districts: eight. The average enrollment in rural districts is 2,979

(meeting AEL's working definition of a small countywide district, that is, fewer than 3,000 students). The average enrollment in Kentucky's non-rural districts is only 4,562, and 63 percent of Kentucky's non-rural districts are subcounty districts that also meet AEL's working definition of a small independent district: 1,500 students or fewer.

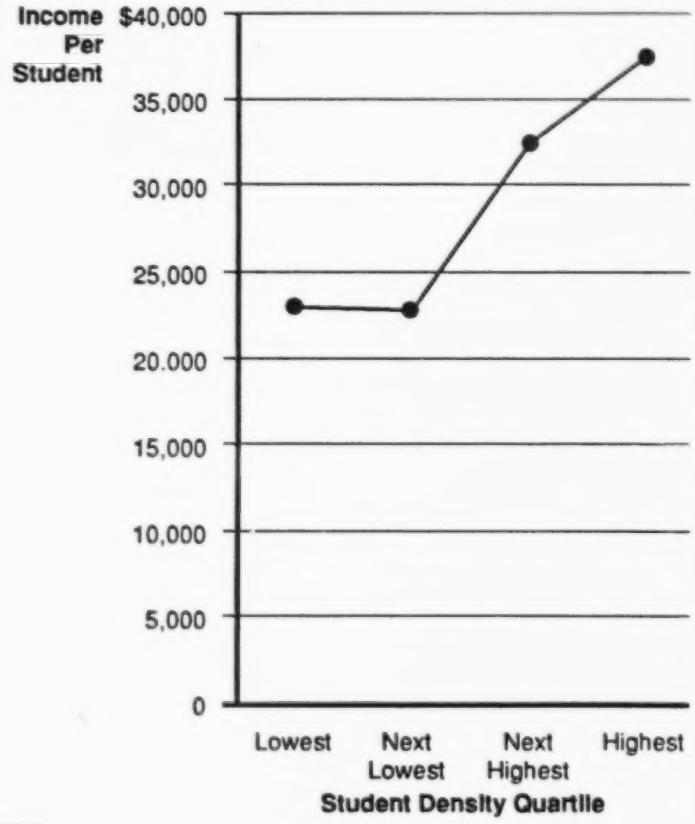
How well are rural school districts funded?

As in most states, the funding formulas for state aid for education are adjusted according to the school district's ability to provide funding for education (the power equalization concept). This process theoretically provides for equity in funding, but in practice the program does not meet this objective. The highly varying tax rates on properties and the unequal distribution of wealth in the Commonwealth of Kentucky provide very unequal funding for school districts. Assessed property value per pupil ranges from $323,034 in Butler County to $51,894 in Clay County. (Butler County, however, does not fall in the 10 counties generating the most revenue per student in the state, because tax rates have been rolled back to a much lower level than in Clay County.) The formulas also do not adjust for extraordinary costs in providing services in isolated, rural districts.

In 1985 a lawsuit challenged the state's funding formula, contending that it violated Section 183 of the Kentucky Constitution: "The General Assembly shall, by appropriate legislation, provide for an efficient system of common schools throughout the state." The plaintiffs were The Council for Better Education, Inc. (a nonprofit corporation comprised of 66 predominantly rural school districts); seven individual boards of education; and 22 public school students from the seven individual districts.

In June, 1989, the Kentucky supreme court ruled on this case: *Rose vs Council for Better Education*. The court ruled the state's "entire system" of precollegiate education unconstitutional. The court ruled that, although school laws were not in and of themselves unconstitutional, the operation of the entire state system was unconstitutional on the grounds that students in different districts did not have equal educational opportunity. The court ordered the legislature to correct the inequities by the end of its 1990 session. The outcome of this effort should have a strong impact on the funding for Kentucky's rural school districts, since the criterion for equity is that each school district should provide the same opportunities for education and improvement.

Average Income per Student Enrolled by Quartile of Student Density



KEY:

Income per Student = total amount of personal income in the district divided by the number of students in the district
Lowest Student Density Quartile = school districts with fewer than 7.3 students per square mile
Next Lowest Student Density Quartile = school districts with at least 7.3 but less than 13.8 students per square mile
Next Highest Student Density Quartile = school districts with at least 13.8 but less than 120 students per square mile
Highest Student Density Quartile = school districts with 120 or more students per square mile

FIGURE 3

TABLE 2
Correlations Among Demographic Variables

Correlations:	Nonmetro Population	Income Per Pupil	Poverty Rate	Student Density
% Nonmetro Population	—			
Income Per Pupil	-.61*	—		
Poverty Rate	.28*	-.59*	—	
Student Density	-.67*	.30*	-.08	—

1-tailed Significance: * = .001

To illustrate the degree to which rurality or sparsity of population correlates with low county incomes, Figure 3 charts the income per student according to student density quartiles.

Table 2 shows the high negative correlation between percent nonmetropolitan population and income in Kentucky, as well as the high positive correlation between income and population density. The negative correlation between income per student and nonmetropolitan school district is significant at the .001 level, as is the negative correlation between student density and income per student: the fewer students per square mile, the less income per student.

There has been a great deal of school consolidation in Kentucky's rural school districts. According to State Department of Education staff, virtually all feasible school consolidation has now taken place.

V. SERVICE DELIVERY SYSTEMS FOR SCHOOL IMPROVEMENT

Kentucky's school districts are able to draw upon a number of different sources for assistance in school improvement. As in most states the State Department of Education provides most assistance. In addition to assistance from the state's colleges and universities and from agencies such as AEL, Kentucky-based private agencies and groups play an unusually strong role in Kentucky's system of precollegiate education.

What is the role of the State Department of Education?

The State Department of Education issues regulations setting standards of quality, which the State Department of Education administers. Some of the specific programs in place to ensure school improvement have been mentioned previously: statewide teacher and administrator in-service programs; internship years for beginning teachers and beginning principals during which the neophyte receives assistance as well as evaluation; periodic evaluation of school districts (not individual schools, as was done previously) for purposes of accreditation; an ongoing program of testing, recordkeeping, community input into planning and evaluation; and self-evaluation programs.

One improvement effort perhaps deserves special mention. In 1983 the Kentucky Council on Higher Education instituted a pre-college curriculum, and the state board of education simultaneously increased the credits needed for high school graduation from 18 to 20 credits and echoed the Council's curriculum in state regulations. State officials report that the number of high school students pursuing a pre-college curriculum increased from 42 percent in 1982 to 52 percent in 1989. In addition, 9 percent of students in 1989 were pursuing a vocational-technical curriculum to prepare them for postsecondary work.

What is the role of private agencies and groups?

A striking feature of the Kentucky

educational improvement effort is the number of privately sponsored support efforts. For instance, the Kentucky Educational Foundation provides grants to individual schools and school districts to fund innovative promising practices. An influential organization, Forward in the Fifth, was founded by concerned citizens of the fifth Congressional district, the most rural district in Kentucky, primarily to help improve public education in the area. Other private groups concerned primarily with improvement of education are the Seventh Congressional District improvement movement (encompassing a number of organizations), the Shakertown Roundtable, the Prichard Committee for Academic Excellence, Kentucky Youth Advocates, and (indirectly) the Kentucky Advocates for Higher Education.

What is the role of the legislature?

The Kentucky General Assembly, in response to *Rose vs Council for Better Education*, has created a Task Force on Education Reform, made up of 16 legislative leaders and five members of the governor's staff. It is addressing the supreme court's decision through three subcommittees on issues of governance, curriculum, and finance. Kentuckians hope that unequal educational opportunities currently existing will be eliminated in the near future, as a result of this effort.

Summary

This profile of rural education in Kentucky reviews state policies for rural education at a specific point in time, covering the environment in which rural schools operate, characteristics of rural students and of rural schools, and service delivery systems for school improvement. It provides a snapshot of the condition of rural education in Kentucky in the time frame of 1986-1989. The intention is to compile sufficient meaningful, current information to be of use to state decisionmakers, including legislators, administrators, school staff people, and the general citizenry.

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Note: In addition to information from the sources cited above, this profile contains information based on personal communications, primarily with those persons cited in the **Acknowledgements** section on page 2.